

NOTES

THE following botanical appointments have been recently made by the Colonial Office, on the recommendation of the Director of the Royal Gardens, Kew:—H. Trimen, M.B. Lond., F.L.S., Senior Assistant in the Department of Botany, British Museum, to be Director of the Royal Botanic Garden, Ceylon, in the place of Dr. Thwaites, C.M.G., F.R.S., who retires on pension with the title of Honorary Government Botanist. D. Morris, B.A., Trin. Coll. Dubl., F.G.S., late Assistant-Director of the Royal Botanic Garden, Ceylon, to be Director of the Botanical Department, Jamaica. H. Marshall Ward, scholar of Christ's College, Cambridge, to be employed for two years as Cryptogamist in the investigation of the coffee-leaf disease in Ceylon. He will be subordinated to the Director of the Botanic Garden, and will have the use of the Assistant-Director's house. Mr. Morris and Mr. Ward were formerly students of the Science and Art Department.

OUR readers will deeply sympathise with Sir John Lubbock under the heavy affliction with which he has been visited by the death of Lady Lubbock, which took place on the 20th instant. Her natural abilities were of no mean order, and the warm interest she took in all her husband's pursuits must have afforded him at once encouragement and aid in many of his undertakings. Her sympathies also extended to her husband's friends, and not a few of our readers will be able to call to mind the kind and hospitable reception which they have met with at her hands. Though for some years not in robust health, it was not, we believe, until within the last few weeks that any serious apprehension was entertained of the result of her illness. Lady Lubbock contributed a paper on the Shell-Mounds of Denmark to the volume of "Vacation Journals" for 1862-63; from time to time she was a contributor to *NATURE*, and some few of her writings have appeared in a published form elsewhere; these, however, would afford but a poor criterion of all that she has directly and indirectly done towards the advancement of natural science.

IT is with extreme regret that we record the death, after a long and painful illness, of Charles Henry Jeens, the well-known line engraver. Most of our readers are acquainted with the beautiful portraits of "Scientific Worthies" that appear from time to time in *NATURE*, and many of them can doubtless testify from personal knowledge to the truth and accuracy of these portraits. Few artists ever possessed so fully as Mr. Jeens that esoteric faculty—which so many lack—for realising in an engraving the salient and best expression of a face and of making a portrait really characteristic and life-like. This faculty he held to the last, and increasing illness and pain only seemed to sharpen it. Apart from their value as excellent likenesses these portraits are of high artistic value. Mr. Jeens was noted for the firmness and delicacy of his work, and nowhere are these qualities better shown than in his small portraits. We are glad to say that before he died he had completed several fresh engravings for the series of "Scientific Worthies," which will be issued in due course and possess a mournful interest of their own. Mr. Jeens was only fifty-two years of age when he died.

MR. C. P. EDISON, nephew of the great American inventor, has just died at Paris at the early age of twenty-four. He was his uncle's principal assistant in the production of the loud-speaking telephone, and was sent over to London by him to exhibit that instrument before the Prince of Wales, the Royal Society, &c. He had of late been engaged in applying his uncle's system of quadruplex telegraphy between Paris and Brussels.

AT the annual general meeting of the Cambridge Philosophical Society on Monday evening last, Prof. Alfred Newton, F.R.S., was elected President in the place of Prof. Liveing,

who has served two years. The Vice-Presidents, in addition to the retiring President, are Prof. Stokes and Dr. Michael Foster. The Secretaries remain as before. New Members of the Council: Dr. Phear (Master of Emmanuel College), Prof. Hughes (Woodwardian Professor), and Mr. W. D. Niven, of Trinity College. Prof. Cayley and Mr. W. M. Hicks, of St. John's College, read papers, the latter on the Problem of Two Pulsating Spheres in a Fluid. Prof. Newton, in assuming the Presidency, said he felt bound to put aside all his feelings against holding this responsible position, in view of the wishes of the Council, and also considering that his election was to be regarded not only as a personal compliment, but as a tribute to those studies of which, by virtue of his position, he might be held to be representative. The next meeting of the Society is on November 10, and the junior secretary, Mr. Glaisher, is authorised to receive all communications relating to papers to be read before the Society.

THE sixth meeting of Russian naturalists will be opened at St. Petersburg on January 1. The Committee is composed of professors of the St. Petersburg University, Beketoff, Petrushevsky, Ovsiannikoff, Tamintzin, Wagner, Menshutkov, and Snostrantseff. The meeting will last for ten days, and will have eight sections: Anatomy and Physiology; Zoology and Comparative Anatomy; Botany; Mineralogy, Geology, and Palaeontology; Chemistry and Physics; Astronomy and Mathematics; Anthropology; and Scientific Medicine.

THE last verification of the axes of the Gothard tunnel between Airolo and Göschenen was to be made this week. It is now confidently expected that the workmen from the two extremities of the tunnel will shake hands midway in the mountain before New Year's Day.

PROF. A. H. SAYCE appeals to the public through the *Times* on behalf of a tour of exploration in Biblical lands, in which Mr. W. St. Chad Boscawen, the well-known Assyrian scholar, is at present engaged. Through the kindness of a few friends funds have been raised to carry him as far as Beyrouth, whence he hopes to travel through Northern Syria and the Tigris-Euphrates Valley, visiting and examining on his way the sites of Carchemish and other Hittite cities, Nineveh, Calah, Assur (the ancient Assyrian capital), Balawat (from which Mr. Rassam obtained the bronze gates now in the British Museum), and Bagdad. Bagdad will be a centre for exploring Ur. The success of the expedition will, of course, largely depend on the funds at Mr. Boscawen's disposal, and Mr. Sayce hopes, therefore, that he will be assisted in his work by those interested in the archaeology of the East. Subscription will be received by the treasurer of the fund, Mr. Edmond Beales, Osborn House, Bolton Gardens South, South Kensington.

ON Saturday, October 25, the five academies constituting the Institute of France had a solemn meeting to award the biennial prize granted every two years by one of the academies. The turn this year being that of the Academy of Moral and Political Sciences, the prize was taken by M. Demolombe, dean of the Faculté de Droit of Caen, author of a voluminous work on legislation. The meeting was presided over by M. Danbrée, actual president of the Academy of Sciences, who delivered a very short inaugural address; but the learned geologist did not omit to make allusion to the unity of composition of the whole solar system as testified by the analysis of aérolites.

DURING the last few weeks the workmen engaged in making a road near Colberg, in Pomerania, found several indications that they were in the neighbourhood of an ancient burial place. The proprietor of the site, Herr von Kamecke, being solicitous for the preservation of any remains which might be found, had some excavations made under proper control. Twenty urns were

found ; most of them had been shattered by the penetration of roots of trees and other causes, so that some of their contents only could be rescued. However, three large and two smaller urns were saved, quite uninjured, and two other large ones were taken up much shattered. The contents of the urns consisted chiefly of a sort of glass beads, rings, and needles of bronze and some small fragments of bronze wire. One iron needle and two iron rings were also found. All the things saved have been handed over to the Pomeranian Historical and Antiquarian Society.

SEVERAL German newspapers strongly deprecate the undignified tone which seems to have reigned amongst the participants in the recent celebration at Pompeii. It appears that the majority of the visitors treated the whole matter as an excellent joke, and behaved very much as they would have done at a fair or at some other Neapolitan *frête*. Many of the archaeologists who had come long distances to be present at the celebration, left the dead city in disgust at the behaviour of the multitude, long before the proceedings were half over. One of the articles referred to expresses the hope that in the year 1879 the Neapolitans will have sufficiently improved in manners as well as gained in seriousness, to render a repetition of the disgraceful scene impossible.

THE London correspondent of the *Scotsman*, who is usually particularly well informed, states the Treasury has definitely decided not to ask Parliament for the cost of fitting up the new Natural History Museum at South Kensington and for the removal of the Natural History Department of the British Museum thereto till 1881. We are glad to be assured, however, that this statement should only be received as a rumour, and is not yet sufficiently authenticated. Let us trust that it will not be authenticated at all.

WE have received vol. iv. of the *Entomologische Nachrichten*, edited by Dr. F. Katter, Gymnasiallehrer am k. Pädagogium zu Putbus, Insel Rügen (Quedlinburg : Vieweg). We believe this magazine was started a few years ago as a monthly publication ; but it is now issued fortnightly. It supplies a want that doubtless was long felt amongst German entomologists, affording a medium for constant intercommunication, and containing, moreover, many biological and other notes of much more than ephemeral value, notices of interesting excursions, discussions on the best means of preparing insects for scientific study, some good notices of new books, useful general bibliographic information, &c. We imagine most working entomologists in this country who can read German already see it, those who do not will find it to their advantage to possess it.

THE death is announced of Dr. Eugen Dühring, the well-known author of the "Kritische Geschichte der allgemeinen Prinzipien der Mechanik" and "Privatdozent" in Berlin. He was born in 1833 in Berlin.

THE Committee appointed by the Royal Irish Academy to investigate the rocks of the districts of the Curlew Mountains and about Fintona, have discovered in the supposed "Old Red Sandstone" fossils of Silurian types.

THE thirteenth session of the Whitehaven Scientific Association was opened on the evening of Tuesday, October 21, when a *conversazione* was held in the Town Hall, which was largely attended by the members of the Association and their friends. The president for the year, Mr. A. Kitchin, F.C.S., delivered an address eulogistic of the labours of Dalton, with reference specially to the atomic theory. Crookes's tubes illustrating the properties of "radianc matter" were exhibited, and many objects of interest in science and art were also displayed in the room. The Association, which now numbers nearly 300

members, has been of considerable benefit in popularising science, mainly in the direction of series of lectures. It has formed the nucleus of a museum intended to represent local natural history, and has also established a library of scientific works. It is to be regretted that classes, in connection with the Association, have not hitherto been successful ; further efforts in this direction are desirable in order that the work of the society may have the permanent value which systematic teaching alone can give.

A LOCAL anthropological exhibition is to be opened at Kazan by the local society of naturalists. We wish success to this young society, which displays a remarkable activity, and the publications of which contain many most valuable scientific papers.

IN consequence of the great efforts recently made for the improvement of the several Electrical specialties, a Chambre Syndicale of Electricity has been established in Paris. The number of subscribers is seventy-five, and the first meeting took place on October 27.

M. BROCA has presented to the Anthropological Society of Paris the head of Ataï, the principal mover of the great Kanaki rebellion in New Caledonia, and of a native enchanter who was killed in the same battle as the chief. These two heads had been cut off by a soldier, preserved in spirit and brought to Paris by him as a curiosity. They will be submitted to a thorough scientific examination.

FOR the first time perhaps in the history of electric lighting two rival magneto-electric machines are illuminating the same hall. The Lontin and Siemens generators and lights are exhibited at about 120 yards from each other in the large hall of the Palais de l'Industrie, at Paris. Each electrical machine is worked by steam, and consumes a certain amount of horse-power. The competition is too recent to offer yet any definite opinion on the respective merits of the apparatus confronting each other.

TELEGRAMS from Murcia state that the city and celebrated *Muerta* were inundated by an immense waterspout which was formed in the sea at a distance from the coast on the night of October 14-15. Salt water was discovered at a distance of 45 kilometres from the sea. Another great atmospherical commotion was experienced three days afterwards. A night snow-storm enveloped the whole of Austria and Switzerland, and in Vienna the thickness of the snowfall was several inches. It is the first time since 1852 that snow has fallen so early in Vienna, but not the earliest time on record, as in 1769 it fell on October 12.

A CEYLON paper states that an illustrated work on the Lepidoptera of the island is to be published at the expense of the Colonial Government.

RECENT intelligence from Victoria states that coal has been found on the Murray River near its confluence with the Murrumbidgee.

THE Phylloxera has appeared in the district of Geelong, Victoria.

A BRILLIANT meteor was observed at 5 P.M. on the 13th at Belluno, Italy. It was first bright red and then greenish white, and moved from east to west, at an angle of 45 deg. with the horizon.

THE Société française de Physique commences its meetings for the approaching session of 1879-80 on November 7.

WE would call attention to a very useful Index which has been begun in the *Gardeners' Chronicle* of October 11. It is intended to comprise references to the more important plants mentioned in the *Chronicle* from 1841 to 1878, including numerous original

descriptions by Lindley, Hooker, De Candolle, &c. This Index we think is likely to prove useful to botanists at large, and especially to those who are interested in the history of cultivated plants, and who may wish to know where to lay their hands on figures or descriptions of them.

THE applications of science at least seem to be obtaining some attention at the Antipodes; Stillwell and Co., of Melbourne, send us the following announcement of a new work to be published by them: "The Chemistry of Agriculture," by R. W. Emerson MacIvor, A.I.C., F.C.S., &c., lately Senior Demonstrator of Theoretical and Practical Chemistry, Anderson's University, Glasgow, with Appendices: Victorian Geology in its Relation to Agriculture, by Norman Taylor (of the late Geological Survey). The Conservation of Water for Agricultural and Pastoral Purposes, by G. Gordon, M.I.C.E. Suggestions on the Maintenance, Creation, and Enrichment of Forests, &c., by Baron von Mueller, K.C.M.G., F.R.S., &c.

THE Astro-physical Observatory on the Telegrafenberge, near Potsdam, was completed during September last, and has now been definitely handed over to its scientific directors.

PROF. SILVANUS THOMPSON has published a pamphlet of 74 pp. on apprenticeship schools in France, a subject on which he read a paper at the recent meeting of the British Association. The little book deserves the attention of all interested in technical education.

THE West London Scientific Association issue a very satisfactory Report for 1878-9.

THE museum of the St. Petersburg Academy of Sciences has made a valuable acquisition in the head of a *Rhinoceros tichorhinus*, very well preserved and covered with patches of hair. It is a part of a nearly complete carcass which was discovered on the banks of a tributary of the Yana, some 130 miles north of Verkhoyanak.

MESSRS. CASSELL have sent us the first two parts of a work on "European Ferns," illustrated by beautifully coloured plates. The text is by Mr. James Britten.

WE notice a useful publication undertaken by the Kieff Society of Naturalists, being a complete index of all works on mathematics, natural science, and medicine that have appeared in Russia during the years 1872 to 1877. The index for these five years has already appeared.

ANOTHER useful private undertaking is a weekly paper, *Rossiyskaya Bibliografija* (Russian and Slave Bibliography), appearing at St. Petersburg; it contains the titles of all Russian and Polish publications, with short notices about some of them.

MESSRS. GRIFFITH AND FARRAN will shortly publish a book entitled "On the Leads; or, What the Planets Saw." The object of the work is to bring the planets of our system into nearer acquaintance, making each give an account of itself to a little girl who watches them through her father's telescope on the leads of the house; their mythological character being made the mouthpiece of their astronomical and physical history. It is written and illustrated by Mrs. A. A. Strange Butson.

THE additions to the Zoological Society's Gardens during the past week include two Bonnet Monkeys (*Macacus radiatus*) from India, presented respectively by Mr. S. E. Phillips and Mr. J. E. Medley; a Macaque Monkey (*Macacus cynomolgus*) from India, presented by Mrs. Franklin; a Lesser Black-backed Gull (*Larus fuscus*), British, presented by the Rev. F. H. Addams; a Mississippi Alligator (*Alligator mississippiensis*) from North America, presented by Capt. J. H. Mortimer; a Garnett's Galago (*Galago garnetti*) from East Africa, a Banded Ichneumon (*Herpestes fasciatus*) from West Africa, a Sämmering's Antelope (*Gazella sämmeringi*) from Abyssinia, two Dufresne's Amazons (*Chrysotis dufresniana*) from South-East Brazil, purchased.

THE SANITARY CONGRESS

THIS Congress continued its meetings at Croydon during last week, when several interesting addresses were given. Mr. Douglas Galton, in his address last Thursday, spoke of that large class of conditions which are the direct result of the circumstances to which man is exposed in consequence of living in communities. All living beings are in a continual condition of change, which results in their throwing off from the body matters which poison earth, air, and water, unless space, time, and opportunity are afforded for the counteraction of these deleterious effects. He showed how thus resulted both epidemic and zymotic diseases, the presence or absence of which in any locality, and the degree of their virulence depend on the sanitary surroundings. Cholera and dysentery are principally connected with the condition of the water supply; while an epidemic prevails the question whether a given population shall suffer or escape may almost be predicted from a chemical analysis of the drinking water. It is to the physiologist and the chemist that we must look for the causes from which these baneful effects arise, and what are the conditions which should be altered to prevent or remove them. The engineer steps in after these causes have been pointed out, and it is for him to design the methods of prevention or removal.

In places where many dwellings are congregated together the requirements for health may be classed as—first, those that are common to the community, such as the supply of good water, the removal of foul water, and the removal of refuse matter; and secondly, those which immediately concern the individual householder, such as the condition of his house and the circumstances of its occupation. It is the interest of every person in a community that every other member of the community should live under conditions favourable to health. Each year, as the population increases and as dwellings multiply, so does the importance of promoting these conditions increase; and so long as preventable diseases exist throughout the country, we must not delude ourselves with the idea that we have done more than touch the borders of sanitary improvement. There are few subjects in which so many professions of progress have been made in the last few years as in the theoretical knowledge of how to provide a healthy dwelling and a healthy town. Books innumerable have been written upon the question. Physiologists have invented every conceivable theory; patentees have invented every conceivable description of apparatus; engineers, architects, and builders overwhelm you with professions of their knowledge of sanitary principles, and millions of money have been spent in furthering the schemes they have devised; and yet, in spite of all these efforts, there are few houses and very few towns where you would not easily detect some grievous sanitary blunders. Mr. Galton believes this to be due, in the first place, to the fact that the majority of men prefer anything to thinking for themselves. They like to obtain their knowledge as they do their hats—from a shop, ready-made. In the second place, the sanitary education of the country has not been brought into a system. In the third place, it has always seemed to Mr. Galton that the system under which the Government advances money for sanitary works, whilst of great *prima facie* advantage in one point of view, yet has its disadvantageous aspect. Mr. Galton then entered into some detail as to the best system to be adopted for encouraging and carrying out sanitary works.

He thinks that we should have reached a higher level of sanitary improvement in this country than now prevails, if the Government had limited itself to its more legitimate functions, viz., first, the enactment of laws requiring sanitary defects to be removed; and second, the promotion of measures for diffusing a sound education in sanitary knowledge; instead of pursuing the course of endeavouring to dictate the exact measures to be followed in each case. But it may be asked, What is sanitary knowledge? It is frequently assumed that drainage and water-supply are the principal subjects which are embraced in the term; but these only make up a small part of the subject. At the present time there does not exist any treatise which brings to a focus the various problems of mechanical and physical science, upon which the knowledge is based.

Mr. Galton then gives several instances in connection with the construction of houses to illustrate the variety of the problems to be solved. A sanitarian tells us that health depends on pure air and pure water. If a site is to be selected, it requires a consideration of its position with respect to its surroundings. It requires a knowledge of the temperature of the air and of the soil; what are the